APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,555	03/05/2007	Ole Koudal	BORS3002	5058

23364   7590   12/02/2010
BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314-1176

EXAMINER
BENLAOSIR, AMINE

ART UNIT	PAPER NUMBER
2612	

MAIL DATE	DELIVERY MODE
12/02/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _04 November 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _18-34_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _18-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

- Claim 18 is amended.

- Claims 18-34 are pending.

Response to Arguments

Applicant's arguments with respect to claims 18-34 have been considered but are

moot in view of the new ground(s) of rejection.

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1.   Claims 18-20, 22-23 and 33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over ***Langels et al. (US6473656B1)*** in view of ***Heidepriem***

(US2006/0164771A1).

As per claim 18, Langels et al. discloses a method for transmitting measured

values between two measurement transmitters, which transmit, via two communication

connections, digital signals according to the master/slave principle and analog signals to

a control system, which serves as master, comprising the steps of:

transmitting digital signals between the two measurement transmitters ***(Langels***

et al. fig 2, col 3 ln 58-65) via the two communication connections ***(Langels et al. fig***

2:46, col 3 ln 58-65);

Providing an additional communication connection for the transmission of the digital signals between the two communication connections; and

examining, using the receiver measurement transmitter, incoming digital signals *(Langels et al. fig 2:40, wherein technology module 40 is equivalent to module 8)* for at least one characteristic value *(Langels et al. col 3 ln 1-16: wherein characteristic values are interpreted as "setpoint" from technology module 9 or "sensor value" from technology module 11)* of the transmitting measurement transmitter *(Langels et al. fig 1:9,11)*, in order to find measured values needed for evaluation *(Langels et al. col 3 ln 37-43)* in the receiver measurement transmitter *(Langels et al. fig 2:40, technology module 8 is equivalent to module 40)*.

Langels et al. does not disclose a method for transmitting measured values between two measurement transmitters providing an additional communication connection for the transmission of the digital signals between the two communication connections.

Heidepriem discloses a method for transmitting measured values between two measurement transmitters providing an additional communication connection for the transmission of the digital signals between the two communication connections *(Heidepriem par[0035]-[0036]: wherein the additional communication connection is interpreted as a direct communication between the two measurements transmitters without using the control system, and the " HART protocol" is provided as a type of transmission "referring to par[0027]").*

Therefore, it would have been obvious to implement an additional communication connection for the transmission of the digital signals between the two communication connections of Heidepriem in the Langels et al. method for transmitting measured values between two measurement transmitters.

The motivation would to provide a device for transmitting, exchanging, and/or forwarding data and/or information in the context of industrial process and/or automation technology, and a device which permits a redundant data communication because a sensor or transmitter can exchange data and information with another sensor or transmitter via a plurality of paths (Heidepriem par[0001], [0006]).

As per claim 19, Langels et al. in view of Heidepriem discloses the method wherein:

communication between the measurement transmitters *(Langels et al. fig 1:9,11)* and the control system *(Langels et al. fig 1:1)* occurs according to the HART®-standard *(Heidepriem par[0027], [0033])*.

As per claim 20, Langels et al. in view of Heidepriem discloses the method wherein:

the receiver measurement transmitter evaluates the units characterizing number associated with a given numerical value *(Langels et al. col 3 ln 1-16)*; and

the meaning of the units characterizing number is established in the HART®-standard *(Heidepriem fig 2:3, par[0027], [0035]: wherein the circular elements at the end of the individual communication paths 3 characterize a first type of HART transmission)*.

As per claim 22, Langels et al. in view of Heidepriem discloses the method wherein:

the receiver measurement transmitter is operated in master mode *(Langels et al. fig 1:1 & 8, col 3 ln 1-16: wherein the module 8 reads out the measured values of the transmitting measurement transmitters such as setpoint values from module 9 and sensor values from module 11)* and reads the measured values out of the transmitting measurement transmitter *(Langels et al. col 3 ln 1-16)*.

As per claim 23, Langels et al. in view of Heidepriem discloses the method wherein:

the receiver measurement transmitter *(Langels et al. fig 1:8, technology module 8 is equivalent to module 40)* and the transmitting measurement transmitter *(Langels et al. fig 1:9,11)* register different measured variables *(Langels et al. col 3 ln 1-16)*.

As per claim 33, Langels et al. in view of Heidepriem discloses the method wherein:

the receiver measurement transmitter accepts and evaluates signals from more than one transmitting measurement transmitter *(Langels et al. fig 2:40: wherein the receiver measurement transmitter herein "technology module" evaluates signals from transmitting measurement transmitters herein "technology modules" 41 & 43)*.

2.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Langels et al. (US6473656B1), in view of Heidepriem (US2006/0164771A1) and further in view of Larson et al. (US6850973B1) herein after Larson*.

As per claim 21, Langels et al. in view of Heidepriem does not disclose the method wherein the transmitting measurement transmitter is placed in the HART® burst mode, for transmitting its measured values in regular intervals.

Larson et al. discloses the method wherein:

the transmitting measurement transmitter is placed in the HART® burst mode, for transmitting its measured values in regular intervals *(Larson et al. fig 1, col 3 ln 11-36).*

Therefore, it would have been obvious to implement the Hart burst mode feature of Larson et al. in the Langels et al. in view of Heidepriem method for transmitting measured values between two measurement transmitters.

The motivation would to provide a communication protocol that is implemented in process control network with a different physical configuration, allows transmission of non-process control information without affecting the network's ability to perform process control (Larson col 3 ln 32-37).

3.   Claims 24-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Langels et al. (US6473656B1), in view of Heidepriem (US2006/0164771A1) and further in view of Cook et al. (US2004/0049358A1)*.

As per claim 24, Langels et al. in view of Heidepriem does not disclose the method wherein the receiver measurement transmitter, a computer unit is installed with

an evaluation program, which determines from the different measured variables a

derived measurement variable.

Cook et al. discloses the method wherein:

the receiver measurement transmitter, a computer unit is installed with an

evaluation program *(Cook et al. par[0070] In 17-21, par[0034]: wherein the*

controller being operable to execute the instructions is equivalent to a computer

unit), which determines from the different measured variables a derived measurement

variable *(Cook et al. fig 7, par[0033]-par[0034]: wherein the calibrating constant*

"k" according to the disclosed equation is computed referring to par[0072], and is

equivalent to the derived measured variable).

Therefore, it would have been obvious to implement the method of deriving

measurement variables of Cook et al. in the Langels et al. in view of Heidepriem method

for transmitting measured values between two measurement transmitters.

The motivation would to provide a reliable and faster method for determining and

obtaining derived measurement data in a variety of applications.

As per claim 25, Langels et al. in view of Heidepriem does not disclose the

method, wherein the receiver measurement transmitter is a vortex measuring device

and the transmitting measurement transmitter is a pressure measuring device, which

determine, respectively, flow velocity and pressure in a medium.

Cook et al. discloses the method wherein:

the receiver measurement transmitter is a vortex measuring device *(Cook et al.*

fig 1:140, par[0056]) and the transmitting measurement transmitter is a pressure

measuring device *(Cook et al. fig 1:160, par[0056])*, which determine, respectively,

flow velocity and pressure in a medium *(Cook et al. fig 7, par[0033]-par[0034])*.

Therefore, it would have been obvious to implement the method of deriving

measurement variables of Cook et al. in the Langels et al. in view of Heidepriem method

for transmitting measured values between two measurement transmitters.

The motivation would to provide a reliable and faster method for determining and

obtaining derived measurement data in a variety of applications.

As per claim 26, Langels et al. in view of Heidepriem and Cook et al. discloses

the method wherein:

installed in the vortex measuring device is a flow computing unit *(Cook et al.*

par[0070] ln 17-21, par[0034]: wherein the controller being operable to execute the

instructions is equivalent to a computer unit), which determines, from the pressure

value and flow velocity of the medium, a derived, measured variable *(Cook et al. fig 7,*

par[0033]-par[0034]: wherein the calibrating constant "k" according to the

disclosed equation is computed referring to par[0072], and is equivalent to the

derived measured variable).

As per claim 27, Langels et al. in view of Heidepriem and Cook et al. discloses

the method wherein:

the vortex measuring device contains an additional, installed, temperature sensor

(Cook et al. fig 6:640, par[0091]).

As per claim 28, Langels et al. in view of Heidepriem and Cook et al. discloses

the method wherein:

installed in the vortex measuring device is a flow computing unit *(Cook et al.
par[0070] ln 17-21, par[0034]: wherein the controller being operable to execute the
instructions is equivalent to a computer unit)*, which determines from the flow
velocity of the medium, the temperature value and the pressure, a derived, measured
variable (e.g. heat flux value or mass flow value) *(Cook et al. fig 7, par[0028],
par[0102]-[0108]: wherein equations 6-10 are representing the derived measured
variables)*. <u>Obviousness is as established in claim 25.</u>

As per claim 29, Langels et al. in view of Heidepriem does not disclose the
method wherein the receiver measurement transmitter is a vortex measuring device
with an installed, additional, temperature sensor, and the transmitting measurement
transmitter is a temperature measuring device.

Cook et al. discloses the method wherein:

the receiver measurement transmitter is a vortex measuring device *(Cook et al.
fig 1:140, par[0056])* with an installed, additional, temperature sensor *(Cook et al.
par[0056]: wherein the temperature sensor not shown in fig 1)*, and the transmitting
measurement transmitter is a temperature measuring device *(Cook et al. fig 6:640,
par[0091])*.

Therefore, it would have been obvious to implement the method of deriving
measurement variables of Cook et al. in the Langels et al. in view of Heidepriem method
for transmitting measured values between two measurement transmitters.

The motivation would to provide a reliable and faster method for determining and
obtaining derived measurement data in a variety of applications.

As per claim 30, Langels et al. in view of Heidepriem and Cook et al. discloses the method wherein:

in the measuring device, a flow computing unit is installed *(Cook et al. par[0070] In 17-21, par[0034]: wherein the controller being operable to execute the instructions is equivalent to a computer unit)*, which determines from the flow velocity of the medium, the temperature value of the temperature sensor of the vortex measuring device and the temperature value of the temperature measuring device, a derived, measured variable (e.g. energy drain) *(Cook et al. fig 7, par[0033]-par[0034], par[0102]-[0108]: wherein equations 6-10 are representing the derived measured variables)*.

As per claim 31, Langels et al. in view of Heidepriem does not disclose the method wherein the receiver measurement transmitter is a vortex measuring device and the transmitting measurement transmitter is a temperature measuring device, which determine, respectively, flow velocity and temperature in a medium.

Cook et al. discloses the method wherein the receiver measurement transmitter is a vortex measuring device *(Cook et al. fig 1:140, par[0056])* and the transmitting measurement transmitter is a temperature measuring device *(Cook et al. fig 6:640, par[0091])*, which determine, respectively, flow velocity and temperature in a medium *(Cook et al. fig 7, par[0028]-par[0030])*.

Therefore, it would have been obvious to implement the method of deriving measurement variables of Cook et al. in the Langels et al. in view of Heidepriem method for transmitting measured values between two measurement transmitters.

The motivation would to provide a reliable and faster method for determining and obtaining derived measurement data in a variety of applications.

As per claim 32, Langels et al. in view of Heidepriem and Cook et al. discloses the method wherein:

in the vortex measuring device, a flow computing unit is installed *(Cook et al. par[0070] ln 17-21, par[0034]: wherein the controller being operable to execute the instructions is equivalent to a computer unit)*, which determines from the flow velocity of the medium and the temperature, a derived, measured variable (e.g. heat flux value or mass flow value, for liquids or saturated steam) *(Cook et al. fig 7, par[0033]-par[0034], par[0102]-[0108]: wherein equations 6-10 are representing the derived measured variables)*.

4.   Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Langels et al. (US6473656B1), in view of Heidepriem (US2006/0164771A1), in view of Cook et al. (US2004/0049358A1) and further in view of Van Der Pol (EP0691528A2)*.

As per claim 34, Langels et al. in view of Heidepriem and Cook et al. does not disclose the method wherein the receiver measurement transmitter is a Coriolis flow measuring device, an ultrasonic flow measuring device or a magneto-inductively or thermally working, flow measuring device.

Van Der Pol discloses the method wherein:

the receiver measurement transmitter is a Coriolis flow measuring device, an ultrasonic flow measuring device or a magneto-inductively or thermally working, flow

measuring device *(Van Der Pol fig 1, page 2 ln 13-20: wherein the measurement transmitter is a Coriolis flow measuring device)*.

Therefore, it would have been obvious to implement the type of receiver measurement transmitter of Van Der Pol in the Langels et al. in view of Heidepriem and Cook et al. method for transmitting measured values between two measurement transmitters.

The motivation would to provide a method for measuring and/or monitoring flow parameters of a medium, which medium flows through a mass flow measuring instrument (Van Der Pol page 1 ln 1-2).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to AMINE BENLAGSIR whose telephone number is
(571)270-5165. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, BRIAN ZIMMERMAN can be reached on (571)272-3059. The fax phone
number for the organization where this application or proceeding is assigned is 571-
273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a
USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. B./   /Timothy Edwards, Jr./
Examiner, Art Unit 2612   Primary Examiner, Art Unit 2612